

Office of Enforcement

CHAIN OF CUSTODY RECORD

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

PROJ. NO. 02AH33		PROJECT NAME Cheshire Monitoring study		NO. OF CON- TAINERS		Activity Code: 12345										
SAMPLERS: (Print Name and Sign) Mike Murphy Mike Murphy Mike Murphy						AIR 20020040										
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	TAG NUMBERS										
DO1	2/13	00:00	X		GHS	1										5-340156 1 to 1
S01	2/13	00:00	X		GHS	1										5-340155 1 to 1
SO2	2/13	00:00	X		RVHS	1										5-340157 1 to 1
SO3	2/13	00:00	X			1										5-340158 1 to 1
																GHS
																Serial # 3012, Pstg avg = 18.7
																Serial # 3013, Pstg avg = 18.45
																RVHS
																Serial # 3009, Pstg avg = 18.6
																Addenville
																Serial # 3011, Pstg avg = *NO RUN
																Equipment Failure

Relinquished by: (Signature) Mike Murphy		Date / Time 2-13-02 12:15		Received by: (Signature) William Anger		Ship To:	
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		ATTN:	
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature) William Anger		Airbill Number UPS #12 401 199 014011 9106	
				Date / Time 2/21/02 12:27pm		Chain of Custody Seal Numbers	

5-140038

5-140038

Project No. 02AH33 Project Name CHESHIRE MONITORING STUDY 90101A
AIR 20020040 ARRIVAL DATE: 2/21/2002 DUE DATE: 3/14/2002

Sampler
Mike Murphy

Cooler ID 02AH331 Page 5-140038

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33DO1	DO1	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340156 1 to 1

Bottle No. 1

Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33S01	S01	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340155 1 to 1

Bottle No. 1

Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33SO2	SO2	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	RVHS	1	5-340157 1 to 1

Bottle No. 1

Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33SO3	SO3	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com		1	5-340158 1 to 1

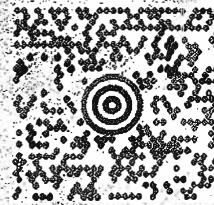
Bottle No. 1

Parameter
PM10

NO RUN EQUIPMENT FAILURE

FROM:
SOUTHEAST DISTRICT OFFICE
(740) 385-8501
OHIO EPA
2195 E. FRONT STREET
LOGAN OH 43138-8637

1 LBS 1 OF 1



IL 606 9-08



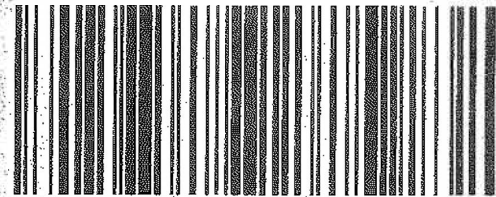
SHIP TO:

WILLIAM SARGENT JR.
USEPA CENTRAL REGIONAL LABORATORY
10 FLOOR
536 SOUTH CLARK STREET
CHICAGO IL 60605

UPS NEXT DAY AIR

TRACKING #: 1Z 401 199 01 4011 9106

1



BILLING: P/P

UOW 3.5.1 Konica F 14.0A 08/2001

CENTRAL REGIONAL LABORATORY

Data Checklist

Data Set AIR 20020040 CHESHIRE MONITORING

- ☒ Chain-of-Custody
- ☒ Analysis Request Form(s)*
- ☐ Sample Tags
- ☒ Transmittal Report w/signatures of the following:
 - Analyst (s)
 - Data Management Coordinator

* Analysis Request Forms provide the data user a means to connect sample numbers with sampling locations

Prepared by:

Sylvia Griffin 3-5-2002
Data Management Coordinator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date:

MAR 05 2002

Subject:

Review of Region 5 Data for **CHESHIRE MONITORING STUDY**

From:

Edgar Santiago, Chemist *ES*
Region 5 Central Regional Laboratory

To:

Attached are the results for: **CHESHIRE MONITORING STUDY**

CRL data set number: **20020040**

Samples analyzed for: **Suspended Particles**

Results are reported for sample designations: **2002AH33D01, 2002AH33S01, and 2002AH33S02.**

MAR 05 2002

Data Management Coordinator and Date Received

Date Transmitted: MAR 05 2002

Please have the U.S. EPA Project Manager/Officer complete the Customer Satisfaction Survey, attached, or call the CRL Sample Coordinator at 3-1226.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML-10C

_____/_____/_____
Received by and Date

Comments:

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (<u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL <u>M</u> ethod Detection Limit (MDL) but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is <u>estimated</u> since it falls below the lowest calibration standard in the calibration curve.
N	This flag applies to GC/MS <u>N</u> tentatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <u>Q</u> uantitation problems, but are confirmed to be qualitatively present in the sample. <u>No value is reported with this qualification flag.</u>
R	This flag applies to analyte data that are <u>R</u> ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>
U	This flag is used when the analyte was analyzed for but <u>U</u> ndetected in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT FOR THE TEAM: ANALYTICAL AND INORGANIC (A&I)

DIVISION/BRANCH: AIR DIVISION SAMPLING DATE: 02/07/2002 LAB ARRIVAL DATE: 02/21/2002 DUE DATE: 03/14/2002
DU NUMBER: 90101A DATA SET NUMBER: 20020040 STUDY: CHESHIRE MONITORING STUDY PRIORITY: 1 LABORATORY :CRL

SAMPLE #	CRL LOG NUMBER	SAMPLE DESCRIPTION	SUSPENDED PARTICLE (g/filter)			
1	2002AH33S01	GUIDING HANDS SCHOOL	0.0117			
2	2002AH33D01	GUIDING HANDS SCHOOL	0.0109			
3	2002AH33S02	RVHS	0.0089			
DATE OF ANALYSIS			02/26-27/2002			
ANALYST			E.S.			

Reviewed by: FAT Date: 3.1.2002

Data Set Number:	<u>20020040</u>	Parameter:	<u>Suspended Particles</u>
Facility Name:	<u>CHESHIRE MONITORING STUDY</u>		
Study Name:	<u>CHESHIRE MONITORING STUDY</u>		
Date of Narrative:	<u>02/27/2002</u>	Analyst:	<u>ES</u>
		Signature:	<u>E.S.</u>

ANALYSIS CASE NARRATIVE

Three (3) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on February 21, 2002. Those filters were fractions of clean filters, prepared at the CRL and sent to the field for exposure. Filter identification numbers and other pertinent information obtained from the individual filters and packaging envelopes are presented in the table below.

Filters ID	Samples ID	Tag Number
Q6279997	2002AH33D01	5-340156
Q6280002	2002AH33S01	5-340155
Q6280000	2002AH33S02	5-340157

Filter equilibrations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters began on 02/26/2002 and was completed on 02/27/2002. All exposed filters were in good conditions.

QUALITY CONTROL (QC):

Analysis results were evaluated using the QC requirements of CRL.SOP AIG047. All the required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits.

SAMPLE RESULTS:

All the sample results are acceptable for use.

ELECTRONIC DATA:

No electronic data.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO. 02AH33		PROJECT NAME Cheshire Monitoring study				NO. OF CON- TAINERS	<div style="text-align: right;">Activity Code: 12345</div> <div style="text-align: center; font-size: 2em;">AIR 20020040</div>									
SAMPLERS: (Print Name and Sign) Mike Murphy <i>Mike Murphy</i> <i>Mike Murphy</i>																
STA. NO.	DATE	TIME	COM P	GRAB	STATION LOCATION											
DO1	2/13	00:00	X		GHS	1	5-340156 1 to 1									
S01	2/13	00:00	X		GHS	1	5-340155 1 to 1									
SO2	2/13	00:00	X		RVHS	1	5-340157 1 to 1									
SO3	2/13	00:00	X			1	5-340158 1 to 1									
							GHS									
							Serial # 3012, Pstg avg = 18.7									
							Serial # 3013, Pstg avg = 18.45									
							RVHS									
							Serial # 3009, Pstg avg = 18.6									
							Addoville									
							Serial # 3011, Pstg avg = *NO RUN									
							Equipment Failure									
Relinquished by: (Signature) <i>Mike Murphy</i>			Date / Time 2-13-02 12:15		Received by: (Signature) <i>William Auger</i>			Ship To:								
Relinquished by: (Signature)			Date / Time		Received by: (Signature)											
Relinquished by: (Signature)			Date / Time		Received for Laboratory by: (Signature) <i>William Auger</i>			Date / Time 2/21/02 12:27		ATTN:						
Airbill Number UPS # 1Z 401 199 014011 9106										Chain of Custody Seal Numbers						

5-140038

Project No. 02AH33 Project Name CHESHIRE MONITORING STUDY 90101A
AIR 2002 0040 ARRIVAL DATE: 2/21/2002 DUE DATE: 3/14/2002

Sampler
Mike Murphy

Cooler ID 02AH331 Page 5-140038

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33DO1	DO1	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340156 1 to 1

Bottle No. 1

Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33S01	S01	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340155 1 to 1

Bottle No. 1

Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33SO2	SO2	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	RVHS	1	5-340157 1 to 1

Bottle No. 1

Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH33SO3	SO3	13/02/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com		1	5-340158 1 to 1

Bottle No. 1

Parameter
PM10

NO RUN EQUIPMENT FAILURE

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT FOR THE TEAM: ANALYTICAL AND INORGANIC (A&I)

DIVISION/BRANCH: AIR DIVISION SAMPLING DATE: 02/07/2002 LAB ARRIVAL DATE: 02/21/2002 DUE DATE: 03/14/2002
DU NUMBER: 90101A DATA SET NUMBER: 20020040 STUDY: CHESHIRE MONITORING STUDY PRIORITY: 1 LABORATORY :CRL

SAMPLE #	CRL LOG NUMBER	SAMPLE DESCRIPTION	SUSPENDED PARTICLE (g/filter)			
1	2002AH33S01	GUIDING HANDS SCHOOL	0.0117			
2	2002AH33D01	GUIDING HANDS SCHOOL	0.0109			
3	2002AH33S02	RVHS	0.0089			
DATE OF ANALYSIS			02/26-27/2002			
ANALYST			E.S			

Reviewed by: FSA Date: 3/1/2002

CRL SOP: HK015	Date: 07 January 2000	Revision No: 1
Data review for the Analytical and Inorganic Group	Page 9 of 9	

ATTACHMENT II

CRL Analytical and Inorganics Data Review Checklist

Batch Number: 20020040 Facility: CHESAIRE MONITORING STUDY
Parameter: pm 10 CRL.SOP: AIG 047

Package Overview:	YES	NO
Raw Data Package Complete?	✓	
Results Reported Correctly?	✓	
Special Requests Done?	N/A	
Calculations Checked?	N/A	
Calibration Not Exceeded?	N/A	
Manual Peak Integration performed? Circle one IC or GC and Check	N/A	
Field QC Checked?	N/A	
Quality Control:		
Holding Times Met?	N/A	
Preservation Checked?	N/A	
Proper Digestion Verified?	N/A	
Initial Instrument Performance Checks Verified?	✓	
Calibration Verification Checked?	N/A	
Sample-Specific QC (Internal Standards or Analytical Spikes) Okay?	N/A	
Matrix QC Checked?	N/A	
Digestion Blanks Checked?	N/A	
Spiked Blank Checked?	N/A	
LCS (if applicable) Checked?	N/A	
QCS (if applicable) Checked?	N/A	
Final Check		
Technical Review Done?	✓	
Narrative Complete?	✓	

Analyst: ES Peer Reviewer: FAN

Date: 3/1/02 Date: 3/1/2002

Comments Attached? (Y/N) N

Data Set Number:	<u>20020040</u>	Parameter:	<u>Suspended Particles</u>
Facility Name:	<u>CHESHIRE MONITORING STUDY</u>		
Study Name:	<u>CHESHIRE MONITORING STUDY</u>		
Date of Narrative:	<u>02/27/2002</u>	Analyst:	<u>ES</u>
		Signature:	<u>E8</u>

ANALYSIS CASE NARRATIVE

Three (3) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on February 21, 2002. Those filters were fractions of clean filters, prepared at the CRL and sent to the field for exposure. Filter identification numbers and other pertinent information obtained from the individual filters and packaging envelopes are presented in the table below.

Filters ID	Samples ID	Tag Number
Q6279997	2002AH33D01	5-340156
Q6280002	2002AH33S01	5-340155
Q6280000	2002AH33S02	5-340157

Filter equilibrations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters began on 02/26/2002 and was completed on 02/27/2002. All exposed filters were in good conditions.

QUALITY CONTROL (QC):

Analysis results were evaluated using the QC requirements of CRL.SOP AIG047. All the required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits.

SAMPLE RESULTS:

All the sample results are acceptable for use.

ELECTRONIC DATA:

No electronic data.

CHESHIRE AIR MONITORING PROJECT

PM10

Parameter: Suspended Particles

Data Set Numbers: 20020035- 20020040

Date of Analysis 02/26-27/2002

Analyst: ES

BALANCE VERIFICATION:

Standard Weights	Balanced weight	Differences
Actual (g)	Balanced (g)	(g)
Limit +/- 0.0005 g		
1.0000	1.0001	-0.0001
2.0000	2.0001	-0.0001
5.0000	4.9998	0.0002

QC-SUMMARY FOR EXPOSED FILTERS

Filter ID	CRL Sample	Analysis	ANALYST	Exposed
Number	I.D Number	Date		weight (g)
Q6280087	2002AH30S02	02/27/02	Analyst 1	4.3952
Q6280087	2002AH30S02	02/27/02	Analyst 2	4.3954
Differences (Limit +/- 5 mg).....				-0.0002
Q6280004	2002AH30S03	02/27/02	Analyst 1	4.3804
Q6280004	2002AH30S03	02/27/02	Analyst 2	4.3807
Differences (Limit +/- 5 mg).....				-0.0003

CHESHIRE AIR MONITORING PROJECT

PM10

Filter ID	CRL Sample	Sampling	Station	Sampler	Pstg	P1/Pa	Total	Pre Weight	Exposed	Weight	PM10
Number	I.D Number	Date	Location	SN	Avg		Volume (M^3)	of filters (g)	weight (g)	Gain	(UG/M^3)
Data set Number 20020040											
Q6280002	2002AH33S01	02/13/02	Guiding Hands School	3012	18.70		0.00	4.3415	4.3532	0.0117	ERR
Q6279997	2002AH33D01	02/13/02	Guiding Hands School	3013	18.45		0.00	4.3703	4.3812	0.0109	ERR
Q6280000	2002AH33S02	02/13/02	RVHS	3009	18.60		0.00	4.3727	4.3816	0.0089	ERR

General information

Standard weights, actual (g)

Balanced weights, balanced (g)

Mettler Toledo

5.00

5.0001

2/26/02 to

1.00

1.0001

S/N 1120181846

0.50

0.5001

2.00

1.9999

7.00

7.0001

SARTORIUS

(500+200^(mg)+200+100)

1.0000

1.0001

S/N 37010119

2.0000

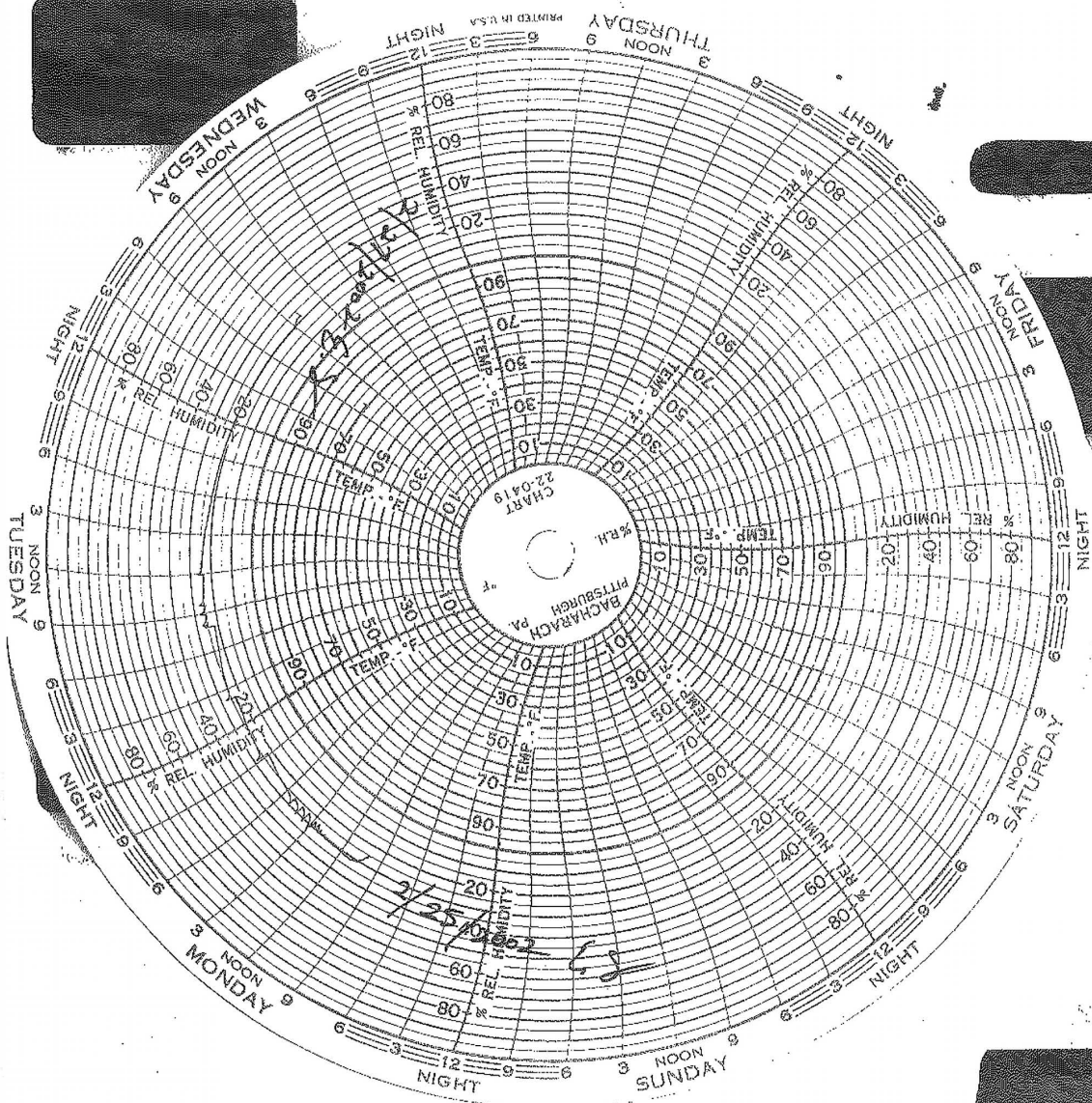
2.0001

2/27/2002 E.S.

5.0000

4.9998

FILTER I.D.	TARE wt (g)	DUP wt (g)	EXPOSED wt (g)	EXPOSED wt. DUP (g)	COMMENTS
Q6280088	4.3680		4.3880		
Q6280087	4.3802		4.3952	4.3954	
Q6280086	4.3774		4.4076		
Q6280010	4.3762		4.3941		
Q6280009	4.3611				
Q6280008	4.3420		4.3370		
Q6280007	4.3662		4.3701		
Q6280006	4.3721		4.3692		
Q6280005	4.3129		4.3332		
Q6280004	4.3647		4.3804	4.3807	
Q6280003	4.3563		4.3715		
Q6280002	4.3415		4.3532		
Q6280001	4.3437		4.3574		
Q6280000	4.3727		4.3816		
Q6279999	4.3639				
Q6279998	4.3384				
Q6279997	4.3703		4.3812		
Q6279996	4.3715				
Q6280093	4.3732				
Q6280094	4.3557				
Q6280095	4.3828				
Q6280124	4.3725				
Q6280125	4.3467				
Q6280123	4.3819		4.4277	4.4281	
Q6280122	4.3809		4.4220		
					Small



COMMENTS:

STD _____ ACTUAL _____
 FLOW m^3/min _____
 ELAPSED TIME MINUTES _____
 AVG. RECORDER RESP. 18.45
 TSP _____
 SITE CHS # 3013, (R) 627 9977
 AIRS _____
 OPERATOR *CEPH* DATE *2-13-02*
 TEMP $^{\circ}C$ _____
 PRESS mmHg _____
 TOTAL FLOW m^3 _____
 SAMPLE WT ug/m^3 _____
 INITIAL WT _____
 FINAL WT _____

US EPA Region 5 Field Sample



5-340156-1

Parameters PM10

20020040

Preservative None

S M M D B D

Sample ID 02AH33D01

X

Sampler

Mike Murphy

Date

2-13-02

COMMENTS:

STD

ACTUAL

PM-10

 $\mu\text{g}/\text{m}^3$ FLOW m^3/min

TOTAL FLOW

 m^3

SAMPLE WT

g

ELAPSED TIME 1440 MINUTES

PRESS

mmHg

INITIAL WT

g

AVG. RECORDER RESP.

18.6

TEMP $^{\circ}\text{C}$

K

FINAL WT

g

TSP

SITE RVHS # 3009

Q 6280000

PM-10

OPERATOR CERN

DATE

2-13-02

AIRS

US EPA Region 5 Field Sample



15-340157-1

Parameters PM10

02002002

Preservative None S M MD B D

Sample ID 02AH33502 X

Sampler Mike Murphy

Date 2-13-02

US EPA Region 5 Field Sample



5-340155-1

Parameters PM10

04002002

S M M D B D

Preservative None

Sample ID 02AH33S01

Sampler Mike Murphy

Date 2-13-02

AIRS

PM-10

OPERATOR

DATE

TSP

SITE

AVG. RECORDER RESP.

TEMP °C

K

FINAL WT

ELAPSED TIME

MINUTES

PRESS

mmHg

INITIAL WT

FLOW

m³/min

TOTAL FLOW

m³

SAMPLE WT

STD

ACTUAL

PM-10

ug/m³

COMMENTS: